

Claims:

1. A protein having a splice factor activity in plants, characterized in that it
- 5   @comprises the amino acid sequence of the protein according to Fig. 1A of the appendix, or  
     @comprises the sequence of the amino acids 1 to 4, 7 to 19, 45 to 52, 111 to 116, and 149 to 153 of the protein according to Fig. 1A of the appendix and has more than
- 10   85% similarity with this protein, or  
     @comprises more than 60% similarity with the splice proteins atSRp34/SR1 and SF2/ASF according to Fig. 2 of the appendix, wherein the G-rich sequence, which corresponds to the amino acids 85 to 113 of the
- 15   atSRp34/SR1 protein is substituted by an S-rich sequence, or  
     @corresponds to, or is derived from, the protein corresponding to Fig. 1A from a plant other than *Arabidopsis thaliana*.
- 20
2. A protein according to claim 1, characterized in that it comprises the sequence of the amino acids 1 to 4, 7 to 19, 22 to 72, 74 to 85, 96 to 141, 149 to 153, 156 to 172, with amino acid 168 being variable, yet not D or N, of the protein according to Fig. 1A of the appendix.
- 25
3. A protein according to claim 1 or 2, characterized in that it comprises an amino acid sequence having at least 90% identity with the sequence of the amino acids 1 to 85

and 96 to 222 of the protein according to Fig. 1A of the appendix.

4. A protein according to any one of claims 1 to 3,  
5 characterized in that it comprises an amino acid sequence  
that has at least 95%, in particular at least 98%, identity  
with the sequence of the amino acids 1 to 85 and 96 to 222  
of the protein according to Fig. 1A of the appendix.
- 10 5. A nucleic acid molecule, characterized in that it  
⑩comprises a nucleic acid sequence according to Fig. 1A of  
the appendix, or  
⑩comprises a nucleic acid sequence encoding a protein  
according to any one of claims 1 to 4, or
- 15 ⑩comprises a nucleic acid sequence which, under stringent  
conditions, binds to the nucleic acid molecule according  
to Fig. 1A of the appendix and encodes a splice protein  
active in plants or is complementary thereto.
- 20 6. A biologically functional vector, characterized in  
that it comprises a nucleic acid molecule according to  
claim 5.
- 25 7. A system comprising a nucleic acid which encodes a  
protein according to any one of claims 1 to 4, and a  
nucleic acid which encodes  
⑩the atSRp34/SR1 protein of Arabidopsis thaliana or  
⑩the protein corresponding to Fig. 1A of the appendix from  
a plant other than Arabidopsis thaliana, or
- 30 ⑩a protein derived from these proteins,

wherein at least one of the nucleic acids is under the control of a promoter not naturally connected with these nucleic acids.

- 5        8. A system according to claim 7, characterized in that  
both nucleic acids are controlled by promoters which are  
not naturally connected with these nucleic acids.

10      9. A system according to claim 7 or 8, characterized in  
that at least one of the promoters under whose control the  
nucleic acids are is an inducible promoter.

15      10. A system according to any one of claims 7 to 9,  
characterized in that the nucleic acid coding for a protein  
according to any one of claims 1 to 4 is under the control  
of a promoter which causes an overexpression of this  
protein.

20      11. A system according to any one of claims 7 to 10,  
characterized in that the nucleic acid which encodes a  
protein according to any one of claims 1 to 4 is under the  
control of a promoter which, under defined conditions,  
prevents the expression of this protein and, under defined  
other conditions, enables the expression of this protein.

25      12. A transgenic plant or plant cell, characterized in  
that it expresses a protein according to any one of claims  
1 to 4.

13. A transgenic plant or plant cell, characterized in that it comprises a nucleic acid molecule according to claim 5 or a vector according to claim 6.

5 14. A transgenic plant or plant cell, characterized in that it comprises a system according to any one of claims 7 to 11.

10 15. The use of a protein according to any one of claims 1 to 4 of a nucleic acid according to claim 5, of a vector according to claim 6 or of a system according to any one of claims 7 to 11 for changing the splice properties of a plant cell or of a plant.

15 16. The use of a protein according to any one of claims 1 to 4, of a nucleic acid according to claim 5, of a vector according to claim 6 or of a system according to any one of claims 7 to 11 for changing the development behavior of a plant.

20 17. The use of a protein according to any one of claims 1 to 4, of a nucleic acid according to claim 5, of a vector according to claim 6 or of a system according to any one of claims 7 to 11 for retarding the flower formation of plants.

25 18. The use according to claim 17, characterised in that the retardation of the flower formation relative to the wild-type is at least 15%, preferably at least 25%.